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ABSTRACT

A project developed and implemented a model retention program to attempt to reduce by 20 percent the dropout rate at Crowley's Ridge Vocational Technical School (Arkansas). The major emphasis was on placing students in a vocational program that would maximize their chances for success. During the program: (1) all students were included in all phases of the project; (2) vocational counseling was provided to all students; (3) innovative vocational software programs were installed to assist administrators, counselors, assessment specialists, and vocational instructors in the strategies necessary for vocational career planning and student retention; (4) each student was provided with an individualized training plan based on entry-level requirements (developed from Department of Labor Standards); and (5) the assessment information was used to place students in appropriate training areas. The retention strategies implemented in this project resulted in significantly lower dropout rates, a high completion rate for students in vocational classes, and more specific and directed job placement activities after graduation. (The appendix includes a form letter and questionnaire sent to program dropouts to determine their reasons for noncompletion and a form used to assign students to programs.) (KC)

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FINAL REPORT

# IMPROVE STUDENT RETENTION THROUGH ASSESSMENT AND IDENTIFICATION OF VOCATIONAL APTITUDES AND ABILITIES

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PLANNING AND DEVELOPMENT

Conducted by

Crowley's Ridge Vocational Technical School
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In Cooperation with
Vocational and Technical Education Division
Arkansas Department of Education
Little Rock, Arkansas 72201

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ABSTRACT

Objectives and Purposes

The overall purpose of the project was to develop and implement a model retention program which would significantly reduce (by 20%) the dropout rate which Crowley's Ridge experiences. The major emphasis would be on placing students in a vocational program which would maximize their chances for success. The specific objectives as they related to appropriate placement and retention are: (a) to include students in all phases of the model program (b) to provide vocational guidance counseling to all students (c) to assemble and install innovative vocational software programs to assist administrators, counselors, assessment specialists, and vocational instructors in the strategies necessary for vocational career planning and student retention (d) to provide each student with an individualized training plan based on entry level requirements (which were developed from Department of Labor Standards) (e) to utilize assessment information to place students in appropriate training areas.

Procedure or Approach

The selected demonstration site was coordinated jointly by the post-secondary institution (Crowley's Ridge Vocational Technical School) with technical assistance provided by the private industry sector. The program consisted of six major components which were utilized with each student enrolling in Crowley's Ridge. The project staff assessed and analyzed overall retention strategies in

each phase of the retention program. The model retention program was implemented, field-tested, and finalized for diffusion and possible adoption by other vo-tech schools in Arkansas.

Contribution to Education

As anticipated, the new retention strategies implemented in this project resulted in significantly lower dropout rates, a high completion rate for students in vocational classes, and more specific and directed job placement activities after graduation. Other expected benefits were: (a) demonstrated the effectiveness and the return on any investment in a vocational counselor (b) identified and justified the need to teach specific skill deficiencies as it related to vocational choice (c) developed an academic-vocational training plan which assisted vocational instructors in delivering quality education based on individualized needs.

INTRODUCTION

During the years proceeding implementation of this program, the dropout rate at Crowley's Ridge Vocational Technical School had been between 35-50%. In the beginning of each new school year, the dropout rate was approximately 20%. The overall purpose of this project was to develop and implement a model retention program which would significantly reduce (by 20%) the dropout rate Crowley's Ridge experiences.

Crowley's Ridge recognizes one of the primary factors contributing to the cause of early school leavers is the difficulty students encounter relating the value of academics to present and future activities. Students enrolling in vocational training frequently feel that academic education is a waste of time. By teaching academics as it relates to vocational choice, students will be made aware of the benefits of obtaining a quality education. This education will be a combination of vocational training and academic preparation to better enable them to enter the "world of work". Many students dropout because they lack the educational skills necessary to complete their chosen vocational program. They choose a program without being aware of the basic academic skills associated with that program. Student awareness is one of the reasons for developing the model retention program. One-half of the approximate 50% of the students who were dropouts of Crowley's Ridge did so because they lacked the

educational skills necessary to complete the program they chose. The model retention program was designed to identify these students prior to enrollment. By early identification of these students, more realistic vocational goals would be established for them. It was hoped that early identification of students who dropout because of inappropriate vocational selection and placement and students who lack the basic skills necessary to complete a vocational program, the dropout rate among these groups of student would decrease.

OBJECTIVES

Through a combination of counseling, vocational guidance, targeted remediation (teaching specific skill deficiency as it relates to vocational choice), and specific vocational activities, students were placed in a vocational program which maximized their chances of success. Research has shown when students are involved in the development of their vocational goals and academic skills are linked directly to those goals, they become motivated to acquire the necessary skills and have an incentive to complete their chosen vocational program.

Specific objectives as they relate to appropriate placement and retention were implemented to:

1. Include student input in all phases of the model program.
2. Assemble and install innovative vocational software programs to assist administrators, counselors, assessment specialists, and vocational instructors in the strategies necessary for vocational career planning and student retention.
3. To provide each student with an individualized vocational-academic training plan based upon entry level skills which were determined by the United States Department of Labor.

By insuring the participation of each student in all levels of the proposed model, students gained valuable insight in vocational career planning and decision making.

During the academic-vocational planning process, a

specific academic-vocational skill profile was used to identify each student's academic strengths and weaknesses as they related to job competencies in a chosen vocational field. The vocational counselor used the academic-vocational skill profile to determine if a student's tested/expressed vocational choice was reasonable or unrealistic. By using the academic vocational skill profile, student placement within the most realistic training program was accomplished.

PROCEDURES

Overall Plan of Action

The student retention program consisted of six basic components, all working together and geared toward realistic student placement and student retention. Only by realistically placing students in a program which utilized fully their skills, abilities and aptitudes could the problem of academic dropouts be readily addressed. The six components of the retention program made use of some innovative software assessment programs. These programs were chosen for their ease of use. Most of the assessment instruments were group administered, computer scored, and audio-visually supported. The six components of the student retention program were:

1. Assessment of interest
2. Assessment of aptitudes and trait factors
3. Interest validation-vocational exploration
4. Academic skills testing
5. Skills analysis related to vocational/career choice
6. Job-person matching assessment

It should also be noted as a student progressed through each phase of the program, individual computer profiles were generated and vocational counseling took place. Special attention was placed on pre-enrollment vocational counseling and the assessment instruments were given prior to enrollment in any vocational program.

The project staff in conjunction with the private industry sector assessed, analyzed, and evaluated each phase

of the program with regard to student retention as it related to appropriate vocational placement.

It is essential at this point to expand on each component as it related to student retention and vocational choice.

Assessment of student interest in vocational training was accomplished using the Pictorial Inventory of Career Clusters (PIC). PIC determined the general readiness of students for vocational training based on their interests, abilities, and aptitudes. PIC was chosen because it could be administered to groups or individuals. It was audio-visually supported (VHS or filmstrip/cassette tape) and computer scored. PIC allowed a student to make responses based on visual stimuli; therefore, those with limited reading and reasoning abilities were not penalized. PIC generated a computer printout listing a student's areas of interests in rank-order of expressed preference, as well as, some possible job titles and vocational programs a student might wish to explore. Once a student had identified areas of interest, vocational counseling with regard to those particular vocational interest areas was given. The counseling sessions were primarily to familiarize the students with the skills necessary to successfully complete a vocational training program within an expressed interest area. Once areas of interest had been identified, assessment of aptitudes and trait factors took place. For assessing aptitudes and trait factors, the General Aptitude

Test Battery (GATB) was used. In appropriate placement of students, assessment of aptitudes as they related to vocational choice was essential. Aptitudes were designed to measure the capacities of an individual to learn various jobs. Since many factors, in addition to aptitude appraisal, determine the ultimate degree of success and satisfaction an individual derives from an occupation, it was of vital importance for the counselor to integrate and explain test results along with other factors so the student could develop a suitable vocational goal and a plan for achieving that goal. For this reason test results were interpreted in terms of probable occupational success. In counseling students for appropriate vocational placement, the Occupational Aptitude Pattern (OAP) was used. In some cases where there was no initial evidence of interest, but the OAP showed marked aptitudinal ability, further exposure to the occupation could reveal latent interest. The OAP was used to encourage students to explore various vocational programs before making a final vocational choice.

It was not surprising to find students interested in a vocational program for which there was no objective evidence of aptitudinal qualifications or to find students who showed aptitudes for vocational areas in which there was no evidence of interest. Because research has shown that measured interests and tested abilities are relatively independent of each other and these two variables usually correlate to a very small degree, interest validation/vocational exploration was phase three of the

model program.

Vocational exploration was available but not required. It allowed the students to validate their interest and assisted them in better understanding the jobs available in a training area and the required performances associated with those jobs. The student watched a filmstrip presentation from a skills orientation series. Since these filmstrips are basically career exploratory, it was not necessary for every student to go through this.

Upon completion of the interest validation phase, academic skills testing and skills analysis related to vocational choice was made. Academic skills testing was conducted to assess a student's strengths and weaknesses for the purpose of developing an academic support plan based on vocational preparation and job performance academic needs. For the purpose of assessing academic skills and teaching specific skill deficiency, the Learning Unlimited Program and Test of Adult of Basic Education were utilized.

Learning Unlimited was chosen because it could be group administered, computer scored, and produced automated reports designed to facilitate a student's individual learning patterns. This program readily identified a student's current level of academic skills and set up a systematic process for the collection of data to identify specific skill deficiencies, if the academic skill level of a student proved to be a barrier to their successfully completing a vocational program.

The Test of Adult Basic Education gave the student a grade functioning level. Most of our students had been plagued with failure. This gave them a level of accomplishment.

Once academic skill levels had been identified, these current academic skills as they related to vocational choice were assessed. For this phase of the program, the Technical Analysis Reports for Guidance in Education and Training (Adult TARGET) was utilized. TARGET provided academic analysis by comparing the student's current academic level with the academic level needed to complete a vocational program and those academic levels required by the job. TARGET was chosen because it generated clear and concise reports which classified a student's vocational interests and identified specific deficiencies and strengths by a computer search of academic skills and entry level requirements taken from the job analysis section of the Dictionary of Occupational Titles. Adult TARGET also generated a counseling report which included remediation requirements, vocational training requirements, staffing required, and any other special services required. These reports provided the student with an up-front understanding of the vocational academic pre-requirements needed for success in their chosen vocational program.

After all assessment instruments were administered and computer reports generated, vocational guidance counseling to insure proper placement took place. It was at this point the student's expressed and validated interests should

match. Students were made aware of program requirements and shown how their skills, abilities, and aptitudes matched program requirements. If it was found a student possessed limited skills, abilities, and aptitudes, alternate vocational possibilities were explored. Insuring that students had knowledge of program requirements (in advance of enrollment) and by giving them several vocational options, student frustration as it related to academia was greatly reduced. With the elimination of this academic frustration, a student should become motivated to learn, thus greatly increasing their chances for success in a chosen vocational program. As the success rate increases, it is expected the dropout rate will continue to decrease.

Trait factor assessments which are obtained from the GATB are necessary to interface with the Data Master program which was the final component of the retention program. Data Master analyzed the characteristics of the occupation being trained for and provided a listing of job opportunities available at the national, state, and local level based on the commonalities of job traits. Data Master was chosen because it integrates previous work history, transferrable skills, and current diagnostic information to produce a "High Across Profile" for maximum employability. A computer generated report based on each student's personal profile rank-orders (by SVQ Level of difficulty) the ten most appropriate jobs, therefore giving each student the highest possible placement profile. These job profile

reports can substantially increase the student's employability options upon completion of vocational training. They can also assist instructors, the vocational counselor, and administrators in direct job placement after graduation and appropriate vocational placement prior to enrollment. By having this system available, students could be shown the benefits of completing a vocational program. High employment possibilities could greatly increase the motivational factor and encourage students to remain in school.

All six components of the student retention program take place prior to enrollment. The last component, the job/person matching system (Data Master), could be utilized again as a student nears completion of their vocational training program.

In the final analysis, successful counseling and vocational placement in regard to student retention depends upon the ability of the counselor to provide the students with sufficient information about themselves and vocational training areas so that the student can decide upon a suitable vocational goal which they accept as desirable and achievable.

FINDINGS

As anticipated, the new retention strategies implemented in this project resulted in significantly lower dropout rates, a higher completion rate for students in vocational classes, and more specific and directed job placement activities after graduation. Other benefits were (a) demonstrated the effectiveness and the return on any investment in a vocational counselor (b) identified and justified the need to teach specific skill deficiency as it related to vocational choice (c) developed an academic vocational training plan which assisted vocational instructors in delivering quality education based on individualized needs.

Crowley's Ridge recognized one of the primary factors contributing to the cause of early school leavers was the difficulty students encounter relating the value of academics to present and future activities. By teaching academics as it relates to vocational choice, students were made aware of the benefits of obtaining a quality education. This education with a combination of vocational training and academic preparation better enabled them to enter the "world of work". Many students dropout because they lack the educational skills necessary to complete their chosen vocational program. They choose a program without being aware of the basic academic skills associated with that program. Student awareness was one of the reasons for developing the model retention program. One-half of the approximate 50% of the students who were dropouts of

Crowley's Ridge do so because they lack the educational skills necessary to complete the program they chose. The model retention program was designed to identify these students prior to enrollment. By early identification of these students, more realistic vocational goals were established for them. By early identification of students who dropout because of inappropriate vocational selection and placement and students who lacked the basic skills necessary to complete a vocational program, the dropout rate among these groups of students did decrease.

Through a combination of counseling, vocational guidance, targeted remediation (teaching specific skill deficiency as it related to vocational choice), and specific vocational activities, students were placed in a vocational program which maximized their chances of success. They became motivated to acquire the necessary skills and have an incentive to complete their chosen vocational program. By insuring the participation of each student in all levels of the retention program, students gained valuable in sight in vocational career planning and decision making. During the academic-vocational planning process, a specific academic-vocational skill profile was used to identify each student's academic strengths and weaknesses as they related to job competencies in a chosen vocational field. The vocational counselor used the academic-vocational skill profile to determine if a students tested/expressed vocational choice was reasonable or unrealistic. By using the academic

the academic vocational skill profile, student placement within the most realistic training program was accomplished.

Crowley's Ridge Vocational Technical School

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Vocational & Technical Education Division
Arkansas Department of Education

VoTech

## DROP-OUT PERCENTAGES

| DEPARTMENT | 1986-1987 | | | | 1987-1988 | | | | 1988-1989 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr |
| Auto Body | 10% | 0% | 17% | 25% | 11% | 33% | 20% | 17% | 8% | 5% | 4% | 9% |
| Auto Mechanics | 31% | 25% | 28% | 41% | 20% | 38% | 8% | 33% | 0% | 5% | 35% | 0% |
| Business | 40% | 31% | 29% | 12% | 36% | 40% | 25% | 6% | 8% | 8% | 13% | 9% |
| Carpentry | 5% | 17% | 20% | 21% | 5% | 19% | 11% | 25% | 9% | 6% | 9% | 11% |
| Drafting | 16% | 17% | 18% | 16% | 4% | 22% | 9% | 25% | 9% | 4% | 7% | 4% |
| Indust. Equip. Tech. | 14% | 11% | 4% | 15% | 11% | 18% | 20% | 12% | 0% | 4% | 13% | 0% |
| Licensed Prac. Nurse | 21% | 0% | 10% | 0% | 28% | 22% | 0% | 0% | 5% | 3% | 0% | 0% |
| Machine Shop | 31% | 19% | 12% | 29% | 18% | 40% | 32% | 46% | 0% | 5% | 21% | 5% |
| Major Appl. Service | 15% | 25% | 21% | 36% | 13% | 33% | 17% | 0% | 0% | 0% | 16% | 14% |
| Welding | 18% | 8% | 36% | 36% | 18% | 0% | 15% | 9% | 9% | 7% | 25% | 0% |
| Child Care I | — | — | — | — | — | — | — | — | — | 4% | 0% | 0% |
| Child Care II | — | — | — | — | — | — | — | — | — | — | 9% | 0% |
| Quarter Average | 24% | 17% | 20% | 21% | 19% | 27% | 17% | 15% | 5% | 5% | 12% | 5% |
| Year Average | 49% | | | | 52% | | | | 17% | | | |

EVALUATION

In order to successfully evaluate this model retention program, it was necessary to develop some evaluation forms. These are student survey forms used to assess appropriate vocational placement by asking specific questions concerning:

(A) Reason for program completion

(B) Reason for student dropout

All students entering Crowley's Ridge are tracked to see why they chose a particular program, how long they stayed in a program, and whether or not they swapped programs. By keeping these records, appropriate vocational-placement assessment based on aptitudes, skills, and abilities can be made. At the end of each grading period, those students who are experiencing academic difficulty are counseled to assess why. Those students who have been identified by Learning Unlimited to be lacking basic skills are also counseled. This counseling is utilized to determine how the students are progressing in their training areas and to reassess their academic skills levels.

A majority of the data and reports needed to evaluate this program is generated by the computer programs we have chosen.

In order to fairly evaluate this program and determine it's success a control group of two years was necessary. Expanding the project's duration allowed comparisons to be made among 1986-87, 1987-88, and 1988-89 dropout rates.

To determine whether or not we are actually retaining students, quarterly as well as yearly rates have been computed. These rates have been computed by department and for the school. Departmental dropout rates readily identify those training areas where the academic-vocational training plan is not being utilized to the fullest and those departments where student have been inappropriately placed.

## CONCLUSIONS

In summary, the student retention project has been an unqualified success, as evidenced by the greatly lowered drop-out rate. The assessment has become an integral part of our program and is utilized in every area for many different needs. Our instructors have come to depend on the availability of comprehensive, valid information on their students. As an added bonus, we have found that by making the assessment mandatory prior to entering a program, it forces students to reflect on their choices, goals, and objectives. It has been and will continue to be, the first step toward turning our students into outstanding members of a well-trained work force.

APPENDIX

Crowley's Ridge Vocational Technical School

P.O. Box 925
Forrest City, AR 72335
(501) 633-5411
Burl W. Lieblong, Director

Vocational & Technical Education Division
Arkansas Department of Education

Dear Former Student:

Our records indicate that you did not complete the vocational training program you enrolled in at Crowley's Ridge Vocational Technical School.

Enclosed is a form we would appreciate your filling out and returning in the self-addressed stamped envelope. Please send this form to us immediately so we can finish the reports that are required of us.

Sincerely,

CROWLEY'S RIDGE VO-TECH SCHOOL

Melvin D. Hamlin

Melvin Hamlin
Student Services

MH/dh

Enclosures 2



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CROWLEY'S RIDGE VOCATIONAL TECHNICAL SCHOOL

Please fill out this form and return it in the self-addressed-stamped envelope that is enclosed.

I did not complete my training at Crowley's Ridge Vocational Technical School because: (Please check one below)

_____Financial Reasons

_____Health Reasons

_____Academic Reasons (If you check this, please answer the following)

Do you feel you were in a program that was too hard?

_____Yes _____No

Do you feel that you were misplaced?

_____Yes _____No

Do you feel a vocational counselor would have increased your chances of staying in school?

_____Yes _____No

_____Went to work

_____Other (Please specify)_____

_____

Signed_____
(Your Name)

4th Quarter 1987-88

Crowley's Ridge Vocational Technical School

P.O. Box 925
Forrest City, AR 72335
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Burl W. Lieblong, Director

Vocational & Technical Education Division
Arkansas Department of Education

VoTech

# REASONS FOR DROPPING CLASSES

| QTR/YEAR | HEALTH | INSTRUCTOR | JOB | MISPLACED TOO HARD | NEEDED VOC. COUNSELOR | NEEDED BABY SITTER | FINANCIAL | ACADEMIC | PERSONAL | MOVED | J.T.P.A. DISCONTINUED PAYING | NEEDED REFRESHER COURSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * 1st/85-86 | | | | | | | | | | | | |
| 2nd/85-86 | 2 | 1 | 2 | | 1 | | 1 | 1 | 1 | | | |
| 3rd/85-86 | 2 | 1 | 3 | 1 | | | 3 | | | | | |
| 4th/85-86 | | | 5 | 1 | 3 | | 5 | 3 | | | | |
| 1st/86-87 | 8 | | 4 | 4 | 4 | 2 | 10 | 3 | | | | |
| 2nd/86-87 | | | 3 | 3 | 2 | | 2 | 3 | | | | 1 |
| 3rd/86-87 | 6 | 1 | 6 | 1 | 1 | | 2 | 1 | 2 | | 1 | |
| 4th/86-87 | 2 | | 2 | | 2 | | 3 | | 2 | | | |
| 1st/87-88 | 3 | 1 | 2 | 1 | 1 | | 4 | 1 | 2 | | | |
| 2nd/87-88 | 1 | | | | | | | | | 4 | | |
| 3rd/87-88 | 2 | 6 | 3 | | 1 | | 5 | | 1 | 1 | | |
| 4th/87-88 | 4 | | 2 | 1 | | | 2 | | | 1 | | |

*Records were not available for this quarter.

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Burl W. Lieblong, Director

Vocational & Technical Education Division
Arkansas Department of Education

VoTech

_____

Date

To Whom It May Concern:

This is to certify that, following assessment and a conference, I recommend do not recommend that _____ enter the _____ program at Crowley's Ridge Vocational Technical School.

Charlotte Wilcoxson
Vocational Counselor

_____
Signature of Student

Further comments or recommendations: _____

_____

_____

_____

_____

Student Disclaimer:

I choose to enter the _____ department at Crowley's Ridge Vo-Tech with full knowledge that it is against the recommendation of the counselor. I realize that I must meet the program standards as outlined in the handbook of Crowley's Ridge Vo-Tech, or I will be terminated from the program.

_____ _____

Signature of Student Date

Copies to: Joanne Daniels, ESD
Walter Meals
Student Services



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